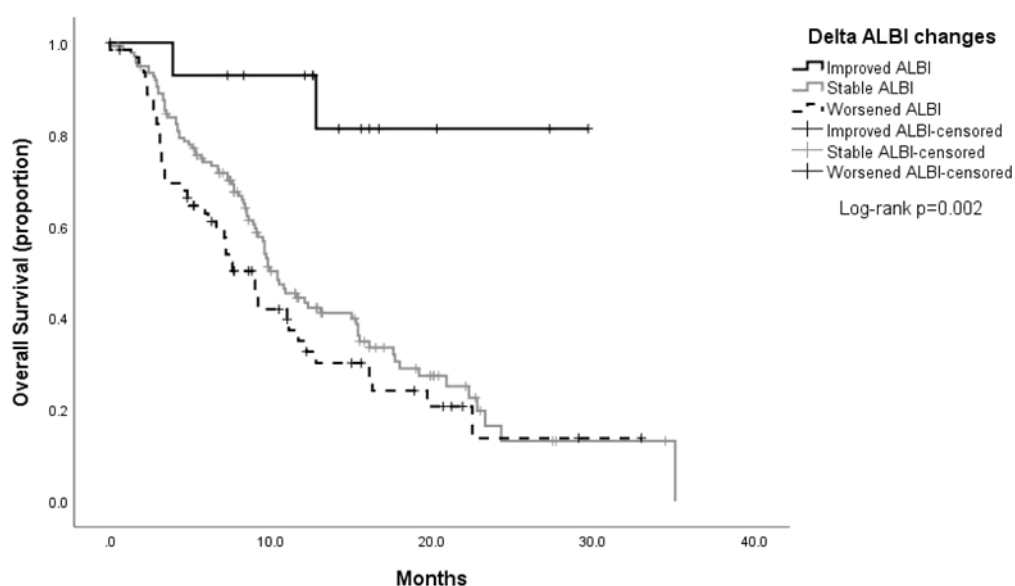


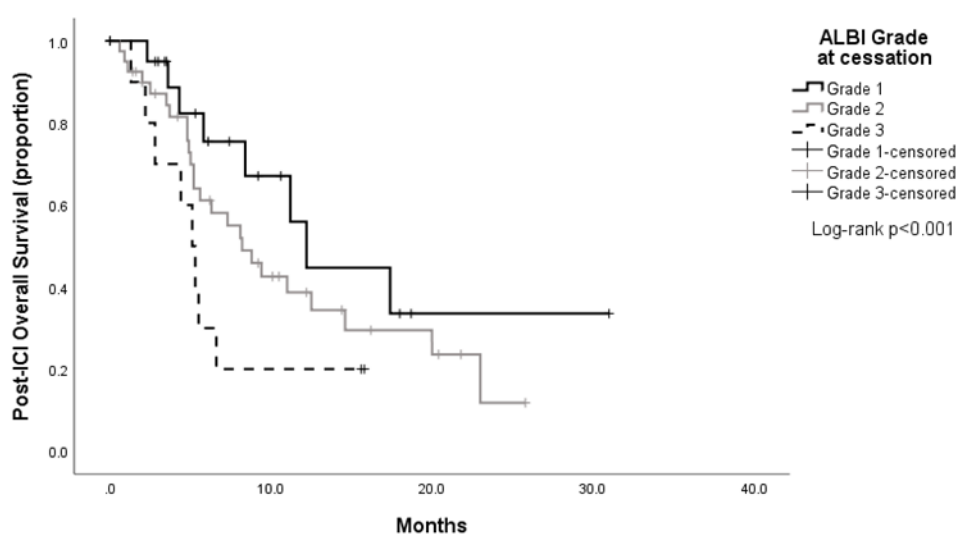
Supplementary Materials

## Immunotherapy in Hepatocellular Cancer Patients with Mild to Severe Liver Dysfunction: Adjunctive Role of the ALBI Grade

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**Figure S1.** Dynamic changes in the ALBI grade from ICI commencement to discontinuation associated with improved OS in HCC patients.



**Figure S2.** The relationship between ALBI grade at discontinuation and PIOS within patients in CTP A functional class at ICI discontinuation.

**Table S1.** Distribution of Treatment-related adverse events (trAEs) according to Child Turcotte-Pugh (CTP) classification.

trAE Class	trAE of Any Grade		
	CTP A	CTP B	CTP C
<b>Dermatologic Toxicity</b>	32 (10)	6 (2)	1 (0.3)
<b>Diarrhoea/Colitis</b>	23 (7)	2 (0.5)	0 (0)
<b>Fatigue</b>	47 (14)	10 (3)	0 (0)
<b>Liver Toxicity</b>	53 (16)	6 (2)	0 (0)
<b>Endocrine Toxicity</b>	20 (6)	2 (0.5)	0 (0)
<b>Pneumotoxicity</b>	12 (4)	1 (0.3)	0 (0)
<b>Others</b>	38 (12)	2 (0.5)	1 (0.3)

**Table S2.** Distribution of Treatment-related adverse events (trAEs) according to Albumin-bilirubin (ALBI) grade.

trAE Class	trAE of Any Grade		
	ALBI 1	ALBI 2	ALBI 3
<b>Dermatologic Toxicity</b>	19 (6)	12 (4)	5 (0.3)
<b>Diarrhoea/Colitis</b>	13 (4)	11 (3)	0 (0.3)
<b>Fatigue</b>	23 (7)	25 (7)	3 (0.3)
<b>Liver toxicity</b>	27 (8)	31 (9)	1 (0.3)
<b>Endocrine toxicity</b>	10 (3)	11 (3)	0 (0.3)
<b>Pneumotoxicity</b>	6 (2)	6 (2)	1 (0.3)
<b>Others</b>	33 (10)	18 (5)	1 (0.3)

**Table S3.** The relationship between CTP class and trAEs in patients treated with ICI as monotherapy or combinations.

ICPI Regimen	Child-Turcotte Pugh Class	No TrAE	TrAE Any grade	Total	Pearson X <sup>2</sup> (p Value)
Monotherapy	CTP A	N	99	75	174
		%	57%	43%	100%
	CTP B	N	40	21	61
		%	66%	34%	100%
	CTP C	N	5	2	7
%	72%	28%	100%		
Total	N	144	98	242	
%	60%	40%	100%		
Combination Therapy	CTP A	N	12	36	48
		%	25%	75%	100%
	CTP B	N	2	1	3
		%	66%	34%	100%
Total	N	14	37	51	
%	2%	72%	100%		
Total	CTP A	N	111	111	222
		%	50%	50%	100%
	CTP B	N	42	22	64
		%	66%	34%	100%
	CTP C	N	5	2	7
%	71%	29%	100%		
Total	N	158	135	293	
%	54%	46%	100%		

**Table S4.** The relationship between ALBI grade and trAEs in patients treated with ICI as monotherapy or combinations.

ICPI Regimen	ALBI Grade	No TrAE	TrAE Any grade	Total	Pearson X <sup>2</sup> ( <i>p</i> Value)
<b>Monotherapy</b>	ALBI 1	N 35 % 51%	34 49%	69 100%	4.11 ( <i>p</i> = 0.12)
	ALBI 2	N 86 % 61%	54 39%	140 100%	
	ALBI 3	N 22 % 71%	9 29%	31 100%	
	Total	N 143 % 60%	97 40%	240 100%	
<b>Combination Therapy</b>	ALBI 1	N 6 % 24%	19 76%	25 100%	0.67 ( <i>p</i> = 0.41)
	ALBI 2	N 8 % 35%	15 65%	23 100%	
	Total	N 14 % 30%	34 70%	48 100%	
<b>Total</b>	ALBI 1	N 41 % 44%	53 56%	94 100%	8.54 ( <i>p</i> = 0.01)
	ALBI 2	N 94 % 58%	69 42%	163 100%	
	ALBI 3	N 22 % 71%	9 29%	31 100%	
	Total	N 157 % 54%	131 46%	288 100%	



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